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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/673,529

09/29/2003

Shachar Fienblit

IL920030032US1

1832

7590 06/07/2007
Stephen C. Kaufman
Intellectual Property Law Dept.
IBM Corporation
P.O. Box 218
Yorktown Heights, NY 10598

EXAMINER

COLAN, GIOVANNA B

ART UNIT	PAPER NUMBER
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2162

MAIL DATE	DELIVERY MODE
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06/07/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Interview Summary

Application No.

10/673,529

Applicant(s)

FIENBLIT ET AL.

Examiner

Giovanna Colan

Art Unit

2162

All participants (applicant, applicant's representative, PTO personnel):

(1) Giovanna Colan.(3) Sanford T. Colb.(2) Sana Al-Hashemi.

(4) _____.

Date of Interview: 06 June 2007.Type: a) ☐ Telephonic b) ☐ Video Conferencec) ☒ Personal [copy given to: 1) ☒ applicant 2) ☐ applicant's representative]Exhibit shown or demonstration conducted: d) ☐ Yes e) ☐ No.

If Yes, brief description: _____.

Claim(s) discussed: Claim 1.Identification of prior art discussed: Bakke, Black.Agreement with respect to the claims f) ☐ was reached. g) ☐ was not reached. h) ☒ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: During the interview, applicant discussed the limitation including: "...expected to be written" recited in claim 1. The proposed amendments overcome the 112, 2nd rejection (in regards to the "expected" limitation), 101 rejection, and obvious double patenting rejection. Therefore, the examiners have agreed to withdraw such rejections.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.



SANA AL-HASHEMI
PRIMARY EXAMINER

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

Examiner's signature, if required



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TELECOPIER TRANSMITTAL LETTER

Date of Transmittal: May 31, 2007

Our Reference No.: 49266

Your Reference No.: 10/673,529

Sent By: Anat Rosensweig

Total number of pages (including this cover sheet) 6

Telefax no: 001-571-273-2752

Name: Examiner Giovanna Colan

Company: Art Unit 2162, USPTO

City: _____

State or Country: USA

PLEASE CALL 972-8-9455122 IMMEDIATELY IF ANY PAGES ARE NOT LEGIBLE OR NOT RECEIVED.

*** IMPORTANT *****

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MESSAGES:

Enclosed please find an agenda, not to be entered, and PTOL-413A forms in preparation for the personal interview with Mr. Colb to be held on June 6, 2007 at 1:30 pm.

49266A1

DRAFT - NOT FOR ENTRY

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Application of : **FIENBLIT et al.**

Serial No.: 10/673,529

: Group Art Unit: 2162

Filed : September 29, 2003 : Examiner: Giovanna B. Colan

For : ASYNCHRONOUS DATA MIRRORING WITH LOOK-AHEAD
SYNCHRONIZATION RECORD

May 31, 2007

DRAFT AMENDMENT - NOT FOR ENTRYHonorable Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450**INTRODUCTORY COMMENTS**

Sir:

In response to an Official Action dated February 7, 2007, Applicant respectfully proposes the following amendment for discussion with the Examiner.

Amendments to the claims begin on page 2 of this document.

Remarks accompanying the amendment begin on page 3.

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AMENDMENTS TO THE CLAIMS

1. (Currently amended) A method for managing a data storage system that includes primary and secondary storage subsystems, including respective first and second non-volatile storage media, the method comprising:

maintaining a record of locations to which data are expected to be written on the primary storage subsystem by a host processor, as indicated by a predetermined prediction algorithm based on the locations to which the data have already been written;

receiving the data from the host processor at the primary storage subsystem to be written to a specified location on the first non-volatile storage media;

if the specified location is not included in the record, updating the record ~~by adding to the record so~~ that the record includes both the specified location and one or more further locations that have not yet been specified by the host processor;

~~signaling~~ outputting an acknowledgment to the host processor to indicate that the data have been stored in the data storage system after receiving the data and, after updating the record if the specified location was not included in the record prior to, ~~after~~ updating the record;

copying the data from the primary storage subsystem to the secondary storage subsystem; and

storing the data in the specified location on both the first and second non-volatile storage media.

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REMARKS

Applicant proposes to amend claim 1, as presented above, in order to overcome the specific grounds of rejection under 35 U.S.C. 101 and 35 U.S.C. 112 that the Examiner has raised.

Specifically, with respect to the rejection under 35 U.S.C. 101, Applicant proposes to replace the "signaling" step in claim 1 with "outputting an acknowledgment" (as per step 80 in Fig. 3 of the present patent application, for example). This amendment both clarifies what is meant by signaling the host processor and provides a concrete and tangible result of the type suggested by the Examiner in the Official Action.

With respect to the rejection under 35 U.S.C. 112 regarding the meaning of the term "expected," Applicant proposes to amend the claims to clarify that the expected locations are indicated by a predetermined prediction algorithm based on the locations to which the data have already been written. Specific algorithms of this sort are described in detail in the specification in paragraphs 0049-0051, for example.

Applicant proposes to modify the phrasing of the "updating" and "outputting" steps in order to resolve the other points that the Examiner considered to be unclear or indefinite.

Applicant believes that the above amendments will overcome all of the rejections under 35 U.S.C. 101 and 35 U.S.C. 112, and will also clarify sufficiently the distinction of the claimed invention over the cited art so as to overcome the rejection under 35 U.S.C. 103(a). The cited references neither teach nor suggest any sort of prediction of write locations, let alone the use of a prediction algorithm in maintaining a record of locations

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to which data are expected to be written based on the locations to which the data have already been written.

The rejection of claim 33 under 35 U.S.C. 101 is unclear, since this claim recites "A computer software product... comprising a computer-readable medium in which program instructions are stored..." in the accepted Beauregard form. Applicant asks that the Examiner clarify this rejection.

49266

Approved for use through 07/31/2008. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Applicant Initiated Interview Request Form

Application No.: 10/673,529 First Named Applicant: Fainblit
Examiner: Brenda Colan Art Unit: 2162 Status of Application: pending

Tentative Participants:

(1) Sanford T. Colb (2) _____
(3) _____ (4) _____

Proposed Date of Interview: June 6, 2007 Proposed Time: 1130 (AM/PM)

Type of Interview Requested:

(1) ☐ Telephonic (2) ☒ Personal (3) ☐ Video Conference

Exhibit To Be Shown or Demonstrated: ☐ YES ☒ NO
If yes, provide brief description: _____

Issues To Be Discussed

Issues (Ref., Obj., etc)	Claims/ Fig. #s	Prior Art	Discussed	Agreed	Not Agreed
(1) <u>101, 112</u>	<u>1</u>	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(2) _____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(3) _____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(4) _____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Continuation Sheet Attached			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Brief Description of Arguments to be Presented:
As is agenda sent to the Examiner

An interview was conducted on the above-identified application on _____

NOTE:

This form should be completed by applicant and submitted to the examiner in advance of the interview (see MPEP § 713.01).
This application will not be delayed from issue because of applicant's failure to submit a written record of this interview. Therefore, applicant is advised to file a statement of the substance of this interview (37 CFR 1.133(b)) as soon as possible.

(Applicant/Applicant's Representative Signature) _____

(Examiner/SPE Signature) _____

This collection of information is required by 37 CFR 1.133. The information is required to obtain or retain a benefit by the public which is in file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 21 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.
If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.